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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/005,846 | 12/03/2001 | Khuy V. Nguyen | 2000.83 | 1022 |
| 29494 | 7590 | 03/11/2005 | EXAMINER | |
| ROBERT H. HAMMER III, P.C. 3121 SPRINGBANK LANE SUITE I CHARLOTTE, NC 28226 | | | CHANG, VICTOR S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1771 | |

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,846

Applicant(s)

NGUYEN ET AL.

Examiner

Victor S Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2004 and 14 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' amendments and remarks and IDS filed on 11/24/2004 and 1/14/2005. Applicants' amendment to claim 9 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Rejections Based on Prior Art

4. Claims 1-3 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-017694 (translation submitted 1/14/2005), generally as set forth in section 6 of Office action dated 9/29/2004, together with the following additional reasoning and response to argument.

First, the Examiner repeats the relied upon reference as follows: JP '694 is directed to obtain a microporous polyethylene membrane which can be desirably used as a battery separator. The membrane comprises polyethylene (aliphatic polyolefin), and may be a blend with at most 30% EPR, etc. (Abstract).

For the product claim 9-11, it is noted that independent claim 9 has been amended to recite *inter alia* "a dry stretched microporous sheet" at line 2.

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With respect to Applicants' argument "In amended claim 9 the clause of the claim, "a dry stretched microporous sheet" is a structural term ... as a particular type of microporous sheet. The other way to get a microporous sheet would be to use the solvent extraction technique outlined in JP 10-017694. Both methods are recognized, in the art, as descriptors of different classes or methods for producing a microporous sheet. See Synthetic Polymer Membranes A Structural Perspective, by Robert E. Kesting ... where the dry stretched process is described on pages 290-297 and where the solvent extraction by the wet process is described on pages 251-261. These pages not only discuss the differences in the two processes but also discuss the physical differences in the end products." (Remarks, pages 8-9, bridging paragraph), it is noted that while Kesting reference describes different membrane manufacturing processes, the "wet process" described by Kesting fails to describe the "stretching step" (before the "solvent extraction step") of JP '694. In particular, JP '694 expressly teaches that the stretching method is not limited, biaxial stretching with tenters is preferred, and the draw ratios should be 4 to 400-fold (paragraphs 0018). Clearly the "wet process" taught by Kesting is not the same as the membrane manufacturing process taught by JP '694. As such, since JP '694 also expressly teaches an apparent "dry stretching step" (i.e., the membrane is "dry stretched" before the solvent extraction step), in the absence of evidence to the contrary, the Examiner notes that amended claim 1 still fails to preclude the teachings of JP '694.

For method claims 1-3 and 6-8, the Examiner repeats (see Office action dated 9/29/2004, page 3) that they essentially mirror the product claims 9-11 and employ only

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a conventional nominal method step “providing”. As such, they are also rejected as set forth above, since the membrane of JP ‘694 is used as (i.e., provided as) a battery separator, as set forth above, which reads upon the instant invention as claimed.

With respect to Applicants’ argument “With respect to claims 1-8 ... the current claims pending ... are drawn as method claims to a new use of a known composition of matter or material. Therefore they are essentially a new use for a known material which are clearly allowable under 35 USC § 100(b).” (Remarks, pages 5-6, bridging paragraph), the Examiner notes that JP ‘694 expressly teaches that the membrane is used as (i.e., provided as) a battery separator, which is the same application as disclosed in the specification of the instant invention (specification, page 4, bottom 5 lines), and the step of “providing” a microporous sheet of known composition is also inherently disclosed, Applicants’ argument to the contrary (i.e., a new use) notwithstanding.

Similarly, with respect to Applicants’ argument “In the instant invention the microporous sheet ... is a known composition of matter of material, however “the method of improving the mechanical strength of a membrane comprising the step of: providing” constitutes a new use.” (Remarks, page 6, bottom paragraph), the Examiner repeats that “providing a known composition” for the same application (battery separator) fails to distinguish the instant invention from the teachings of JP ‘694, which expressly teach a microporous polyethylene membrane which can be used as a battery separator; and the membrane comprises polyethylene (aliphatic polyolefin) which may

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be a blend with at most 30% EPR, as set forth above. In other words, JP '694 teaches the instantly claimed invention as claimed.

With respect to Applicants' argument "The JP 10-017694 reference fails to teach a method of improving the mechanical strength of a membrane ... In the Instant Application it is clear that improving the mechanical strength was demonstrated in tensile strength shown in Table 1." (Remarks, page 7, bottom paragraph), the Examiner notes that the blend compositions listed in Table 1 are all anticipated by JP '694, while Table 1 shows the improvement in tensile properties of a blend of PE/elastomer over PE, these data are irrelevant to the membranes taught by JP '694, which are manufactured under a different process, and also includes a stretching step, as set forth above.

5. Claims 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 10-017694 (computer translation), generally as set forth in section 7 of Office action dated 9/29/2004, together with the additional response to argument, as set forth above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VSC

Victor S Chang
Examiner
Art Unit 1771

2/28/2005



TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700